Smithsonian Institution

U.S. Army DPW Worldwide Training Workshop
Office of Facilities Engineering and Operations

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2 December 2003

Caring for America's Treasures Facilities Management

Smithsonian Institution

Office of Facilities Engineering and Operations

Overview

- **The Smithsonian**
- **OFEO**
- **Centralizing Facilities Management**
- **Use of Performance Indicators**
- **Facilities Budget Alignment**

The Smithsonian Vision

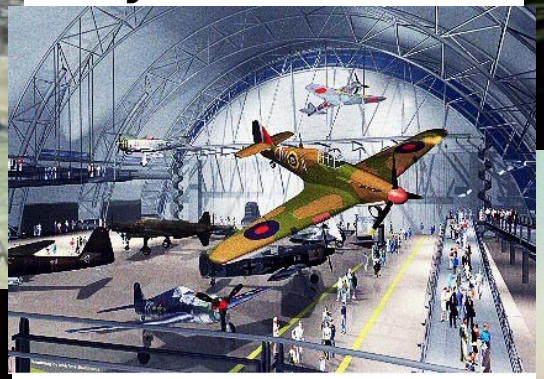
James Smithson's Gift

"I then bequeath the whole of my property...to the United States of America, to found at Washington, under the name of the Smithsonian Institution, an Establishment for the increase & diffusion of knowledge..."

James Smithson (1765-1829)

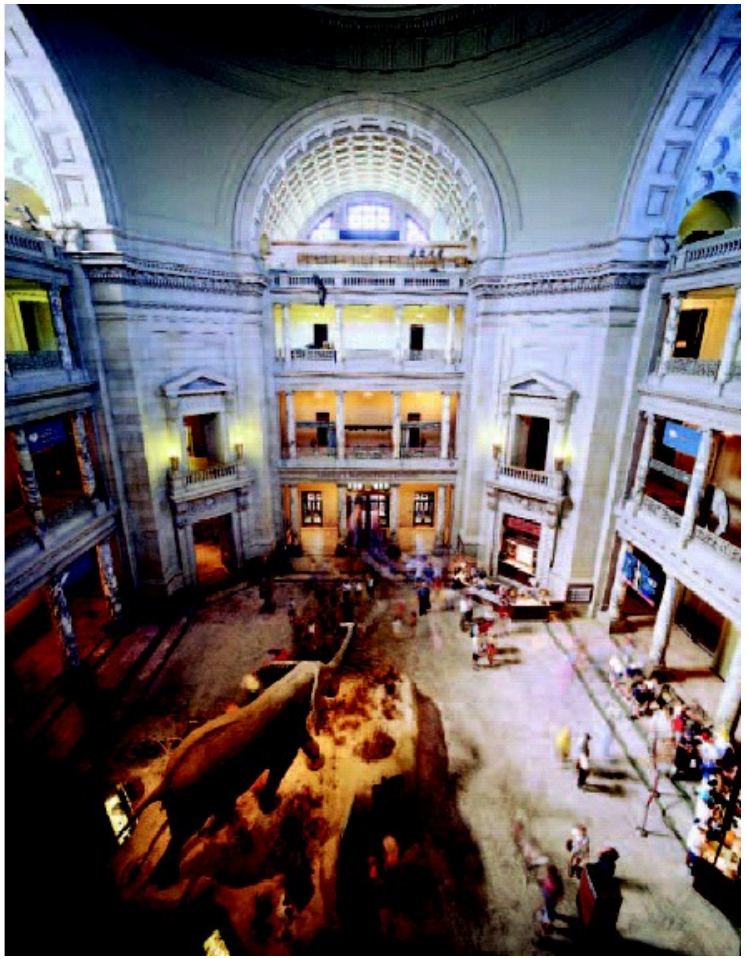
The Diversity of the Smithsonian

- Science
- Art
- History
- Culture
- Technology

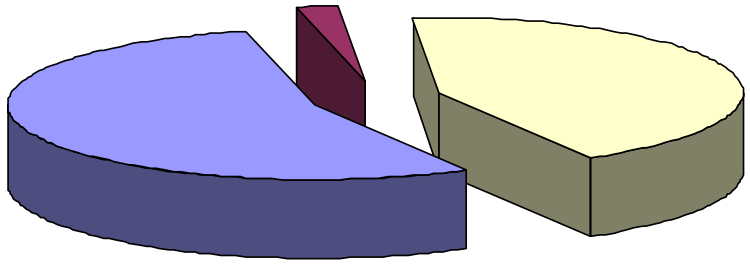


Challenges of Stewardship

- **Over 6,000 employees & 5,000 volunteers**
- **Monumental & historic icons**
- **Open 364 days per year**
- **High rate of visitation (30 million per year)**



The Smithsonian is more than Museums



Legend

- Museums in Washington: 55%
- Museums in NYC: 2%
- Research and Support Facilities: 43%

The Other Smithsonian

Research facilities:

- **Astrophysical Observatories in Hilo, HI; Amado, AZ; and Cambridge, MA**
- **National Zoological Park – Conservation and Research Center, Front Royal, VA**
- **Environmental Research Center, Edgewater, MD**
- **Smithsonian Marine Station, Fort Pierce, FL**
- **Smithsonian Tropical Research Institute, Republic of Panama**

STRI, Bocas Del Toro

Support facilities:

- **Horticultural Greenhouses, Armed Forces Retirement Home, DC**
- **NMAI Research Branch, Bronx, NY**
- **Smithsonian Institution Service Center**
- **Victor Building, DC**
- **Museum Support Center, Suitland, MD**
- **NMAI Cultural Resources Center, Suitland, MD**
- **Paul E. Garber Facility, Silver Hill, MD**
- **Misc. other support and storage facilities**

CRC, Suitland, MD

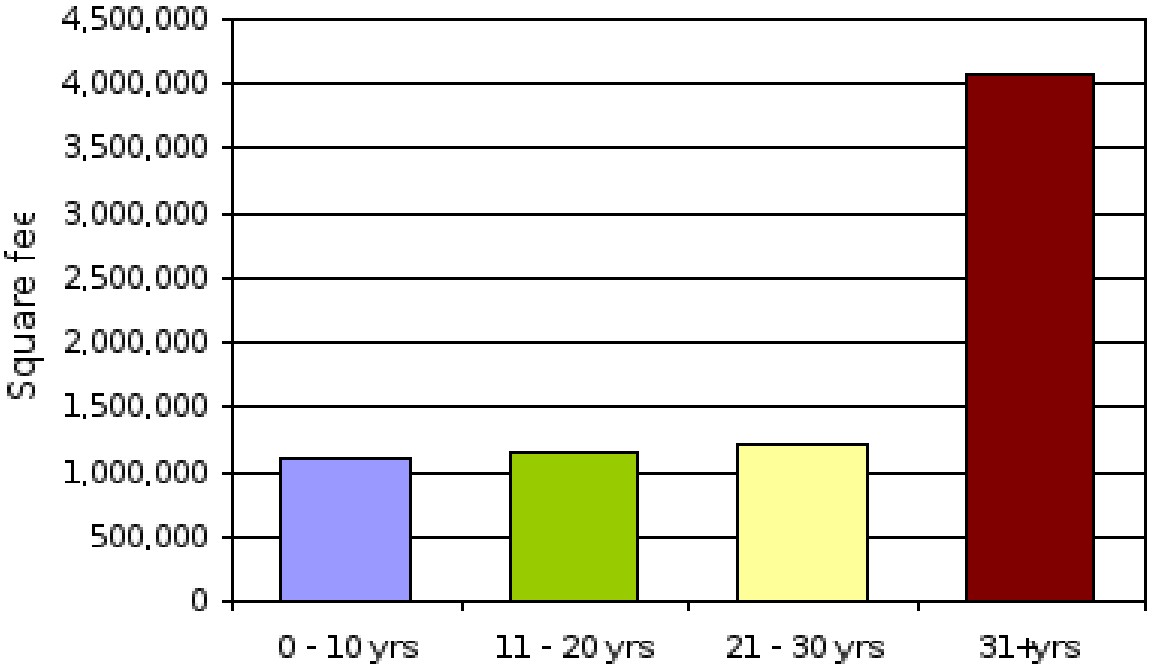
Smithsonian Infrastructure

- **Total Facilities area owned and leased by SI: 9.7 million sq. ft.**
  (owned area 8.7 million sq. ft.; leased area 1 million sq. ft.)
- **Land Area 19,000 acres**
- **Roads 107 lane miles**

National Museum of the American Indian

NASM Udvar-Hazy Center

Age of Smithsonian Facilities



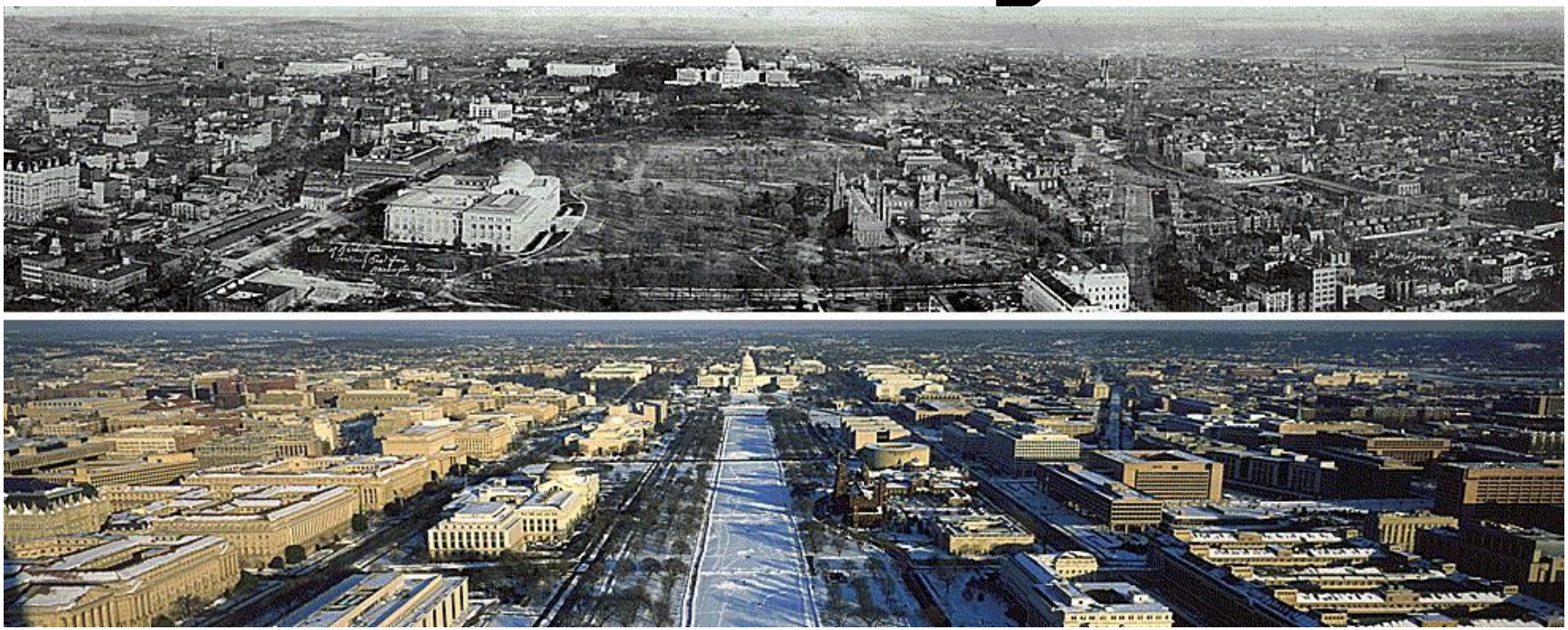
Critical Facilities Issues

- Systems obsolescence
- Age of buildings
- High traffic
- Architectural variety
- Functional diversity
- Track record of understated need

AIB: RUST, PEELING PAINT AND SALTS
BUILD-UP AT BEAM AND PANEL – 1998 PHOTO

AIB: DIAPER" INSTALLED AT NORTH HALL
TO CATCH FALLING DEBRIS

The Smithsonian: Work in Progress



Two views looking east from the Washington Monument :Top, Circa 1911; Bottom, 1976 (National Archives)

Major Capital Renewals and new projects coming on line:

- **NASM Dulles Hazy Center: $253 million; opening 12/03**
- **NMAI Mall Museum: $219 million; opening 6/04**
- **Patent Office Building: $216 million; est. completion 7/06**
- **National Zoo: $200+ million**
- **Future National Museum of African American History and Culture**

OFEO Mission and Vision

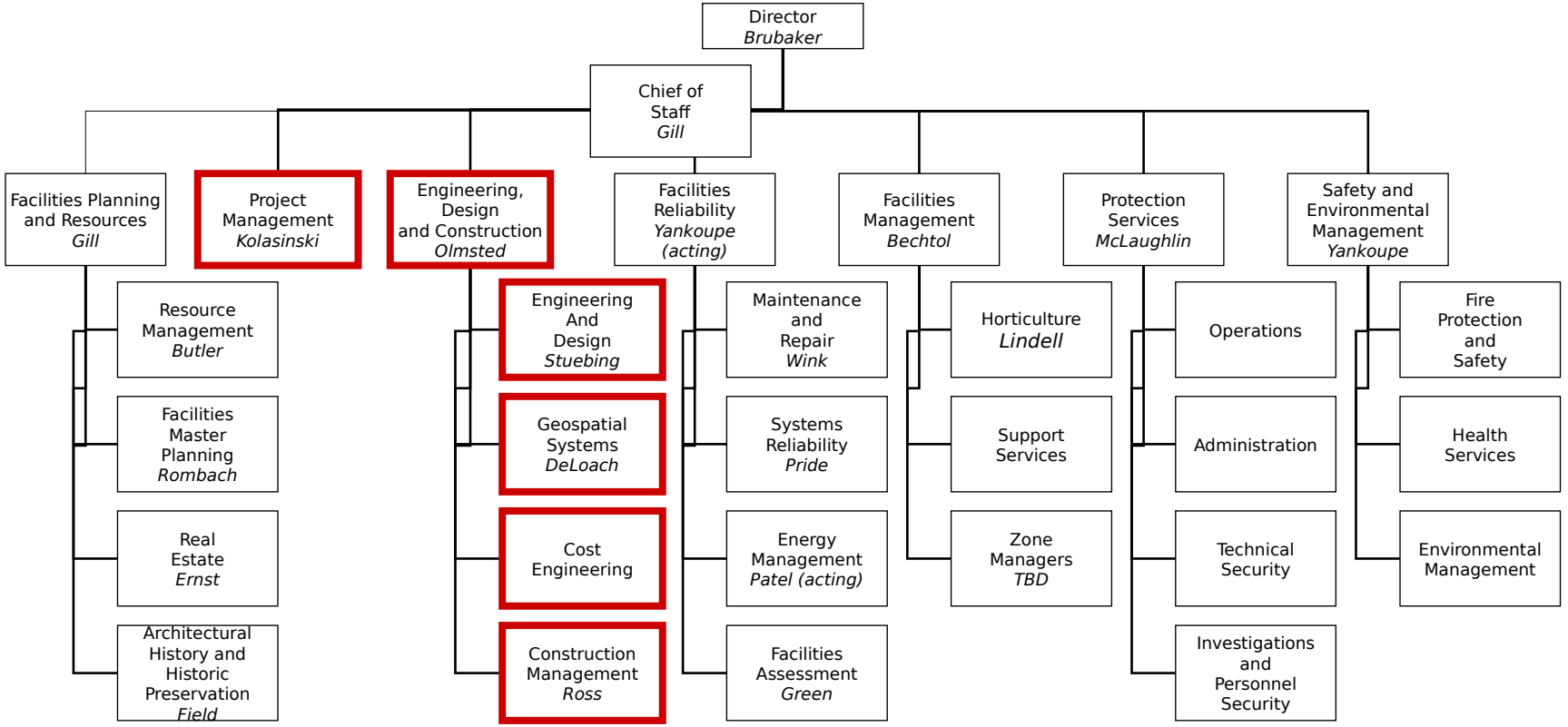
Mission

OFEO provides a safe, secure and quality built environment that enables staff to increase and diffuse knowledge and add to the enjoyment of our visitors.

Vision

We are the model for providing and sustaining world-class cultural and scientific facilities.

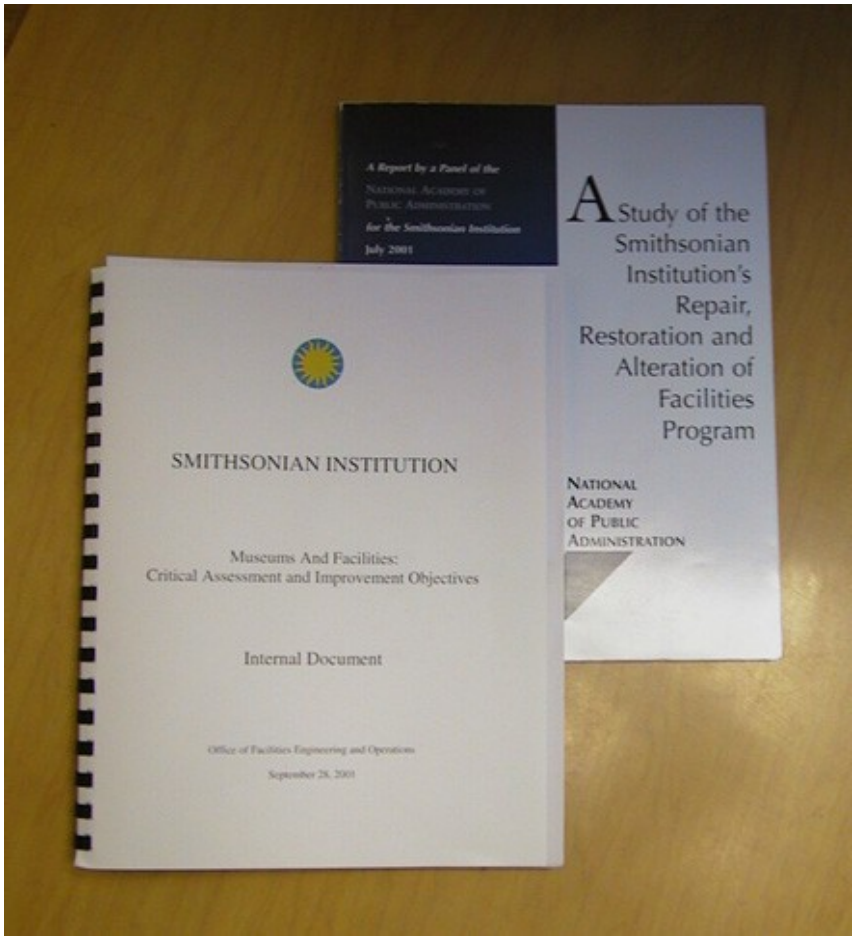
Smithsonian Institution
Office of Facilities Engineering and Operations
(OFEO) Organizational Chart



Background

- **1995**
  Report of the Commission of the Future of the Smithsonian indicates need for $50 M/ year over next decade to restore Smithsonian facilities
- **13 Sep 1999**
  Board of Regents elects new Secretary with mandate to fix business processes
- **2000**
  Secretary tells Congressional subcommittee that, in his view, facilities are in “shabby” condition

Background (cont'd)


A Report by a Panel of the
National Academy of Public Administration
for the Smithsonian Institution
July 2001
A Study of the Smithsonian Institution's Repair, Restoration and Alteration of Facilities Program
National Academy of Public Administration
SMITHSONIAN INSTITUTION
Museums And Facilities:
Critical Assessment and Improvement Objectives
Internal Document
Office of Facilities Engineering and Operations
September 28, 2001

- **2000**
  Congress directs a study to investigate Institution's management and use of funds appropriated for repair, restoration, and alteration, FY 1996-2000
- **2001**
  NAPA publishes its report, "A study of the Smithsonian Institution's repair, restoration, and alteration of Facilities program"
- **2001**
  Office of Facilities Engineering and Operations response – "Museums and Facilities: Critical Assessment and Improvement Objectives."

NAPA Report Findings & Recommendations

- Appropriations (1996-2000) were properly used for purposes requested, but requirements had been understated.
- Extensive backlog of major capitol repairs needed spread over a ten-year period is approximately $1.5 billon.
- Need to improve relationship with OMB and congress by revalidating requirements and providing accurate and reliable cost estimates.

NAPA Report Findings & Recommendations (Cont'd)

- Need to restructure program for day to day operations and recurring maintenance (including PM, PT&I); become proactive. Increase maintenance budget for PM at least $10-15M annually or 0.5% of CRV.
- Integrate facilities maintenance functions under a single facilities organization and staff it appropriately to manage a larger program.
- Fix the broken accounting and reporting systems.

Centralizing Management of Facilities and Functions

Cultural Shift

Museum (User) Control vs. Professional Facilities Management

- **Approximately 450 people in a dozen organizations**
- **Self Directed Task Force**
  - **Study, Analysis, Recommendation (Zone Management)**
  - **Decisions by Leadership (Secretary)**
  - **Standards of Service Agreements**
  - **Severing of FTE's and Dollars (and faces)**
  - **Congressional Reprogramming Action**

Centralizing Management of Facilities and Functions

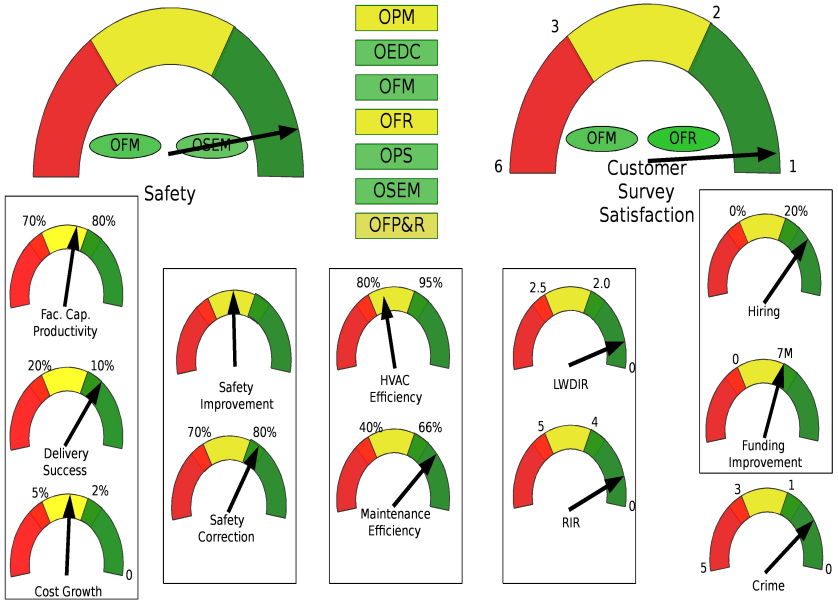
Benefits

- **Professional Management / Focused Leadership**
- **Standardization of Processes**
- **Improved Training**
- **Efficiencies**
- **Uniform Standards**

Use of Performance Indicators to Improve Service

- Establishment of Performance Indicators
  - Leadership directed
  - Measure the "Right Things"
    - Customer satisfaction (quality)
    - Productivity
    - Timeliness
    - Resource Utilization
- Define the Metric(s)
- Determine Criteria for Rating
- Establish a Data Source (Reliable, Consistent)
- Ownership

Use of Performance Indicators to Improve Service (cont'd)



Display (chartology)

- **Benchmarks**
- **Bars, Pies, Balls, Lines, Matrices**
- **Customer Feedback**
- **Dashboard**

Use of Performance Indicators to Improve Service (cont'd)

November 1, 2002

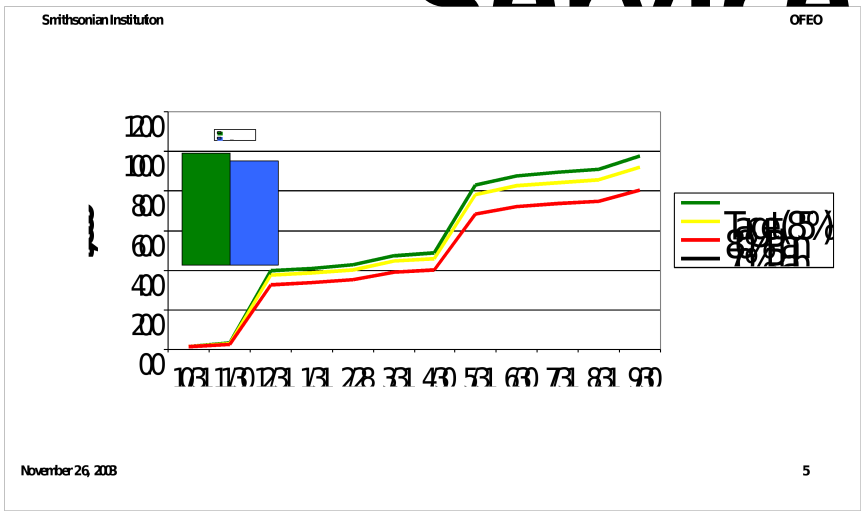
OFFICE OF FACILITIES RELIABILITY
PERFORMANCE INDICATORS

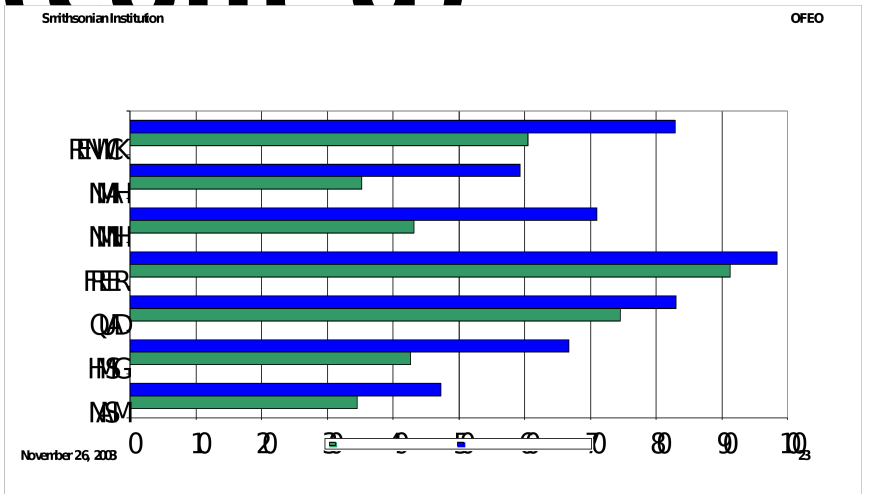
Title/Performance Indicator	Metric Definition/Calculation	Rating Criteria for Green, Amber, Red	Source of Data (on how will be obtained)	FY 03 Target	Tieback to SI Goal	Torch Bearer
HVAC Efficiency (Percent of Time that Temperature and Humidity are in Band[1])	# hours when Temp =70 +/-2 and RH is 50 +/-5 divided by 8760 and multiplied by 100	Green > 95% Amber 80 – 95% Red < 80%	BAS data for six critical areas per museum	Develop Baseline Data	1.1.2, 2.1.7	MS/NB/AP
Maintenance Efficiency (% of Planned Maintenance[2])	Planned maintenance ($) divided by total maintenance ($) times 100	Green > 50% Amber < 40% Red < 30%	Facility Center Report	Develop Baseline Data	1.1.2, 2.1.7	MS/NB/AP
Customer Survey Satisfaction (Maintenance)	Average response to customer survey per question per month	Green < 2 Amber > 2 Red > 3	Customer survey will be e-mailed to customer following completion of all DWO's	Scores of less than 2 where 1 is perfect	1.12 3.13	MS/NB

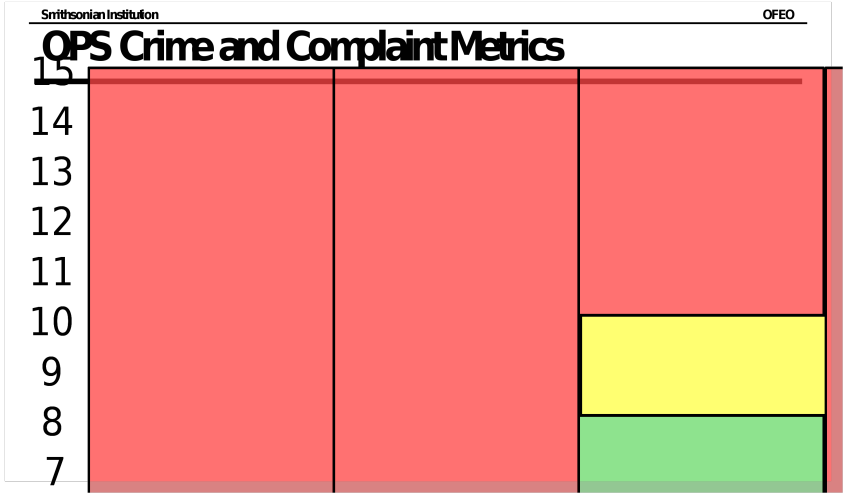
See Notes

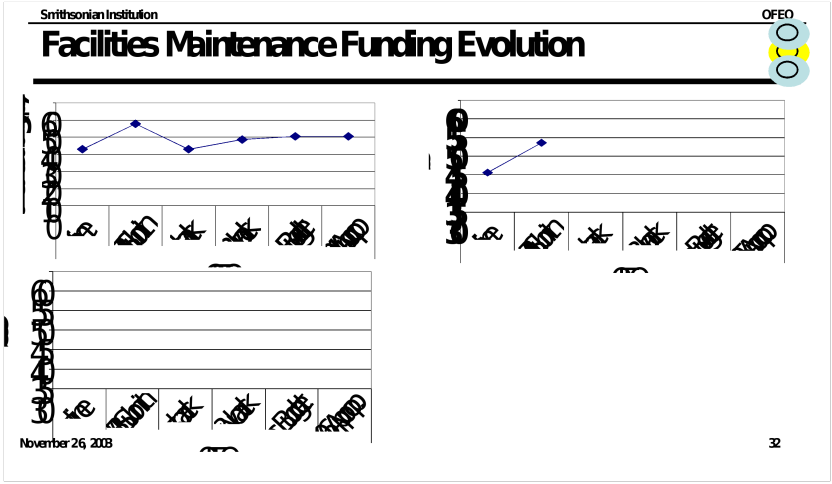
[1] Current average time in the box is 83.3%.
[2] The current SI planned work order (by cost) is ~35%.

Use of Performance Indicators to Improve Service (cont'd)

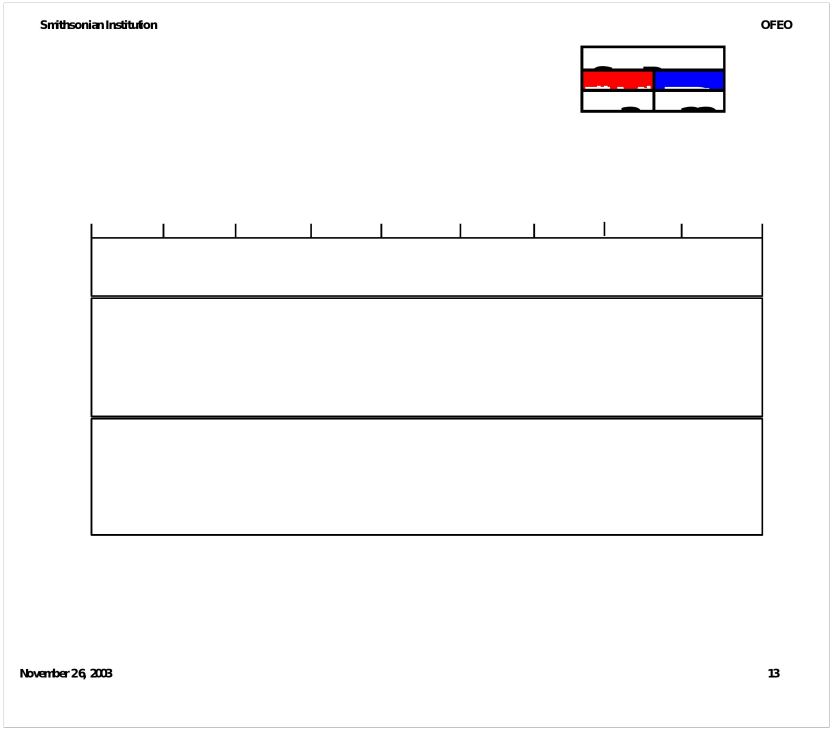








Use of Performance Indicators to Improve Service (cont'd)



Benefits

- Dialog with boss
- "Proof" to Customer
- Quantifiable improvement

Aligning a Facilities Budget

•Drawing attributed to Michelangelo

Principles

- Budget as you execute
- Separate capital from from non-capital
- Fence what you must
  - Congressionally directed (construction)
  - Undernourished programs (maintenance)
- Leave some flexibility

Aligning a Facilities Budget (cont'd)

Lansdowne, Portrait of George Washington By Gilbert Stuart, Recent Acquisition, supported by Donald W. Reynolds Foundation

Salaries and Expenses

- Operations
- Maintenance (incl. Minor Repair)

Capital

- Planning and Design
- Revitalization
- Construction

Issues

- Precise Definitions
- Financial and Facilities Management
- Proper Coding

The Road Ahead

- **FY 2004 Budget Appropriated as Requested**
- **Full Integration of Work Force**
- **Macro-metrics for Capital Improvements and Maintenance**
- **Talented People**
- **Training at all Levels (incl. Professional Ass’ns)**
- **Winning the Resource Wars**